

Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for selectively absorbing oxygen from a gaseous mixture, preferably ambient air, into a liquid medium and subsequently releasing the oxygen to provide it in a concentrated form as a reaction partner for combustion or oxidation reactions, using at least one ionic compound being liquid at the respective process temperature as the medium, characterized in that at least one ionic liquid having a reversible and – with regard to other gases, especially nitrogen – selective oxygen-uptake capacity is used as the medium.
2. (currently amended) The method of claim 1, characterized in that the anion and/or cation of the at least one ionic liquid includes a functional group with highly selective affinity to oxygen.
3. (currently amended) The method of ~~any of the claim~~[[s]] ~~1 or 2~~, characterized in that the medium comprises a high fraction of perfluorinated residues.
4. (currently amended) The method of ~~any of the claim~~[[s]] ~~1 to 3~~, characterized in that gas exchange for absorbing oxygen is achieved by directly blowing finely divided air into the medium.
5. (currently amended) The method of ~~any of the claim~~[[s]] ~~1 to 3~~, characterized in that gas exchange for absorbing oxygen is achieved by means of trickle-bed contactors.
6. (currently amended) The method of ~~any of the claim~~[[s]] ~~1 to 3~~, characterized in that gas exchange for absorbing oxygen is achieved by means of membrane contactors.

7. (currently amended) The method of ~~any of the preceding~~ claim[[s]]1, characterized in that the method serves for operating a combustion system for the combustion of fuels with oxygen in a combustion mixture and that the oxygen absorbed in the medium is released by being blown out by means of the combustion exhaust gases formed during the combustion, constituting the combustion mixture together with these exhaust gases and the fuels.
8. (currently amended) The method of ~~any of the preceding~~ claim[[s]]1, characterized in that the absorbed oxygen is released by exposure to microwaves.
9. (currently amended) The method of ~~any of the preceding~~ claim[[s]]1, characterized in that the absorbed oxygen is released by catalytic degassing.
10. (currently amended) The method of ~~any of the preceding~~ claim[[s]]1, characterized in that the absorbed oxygen is released by temperature increase.
11. (currently amended) The method of ~~any of the preceding~~ claim[[s]]1, characterized in that the absorbed oxygen is released by pressure decrease.